

# AIRE – Memphis SMS

E-Workshop 12/05/07



ASDE-X Surface Surveillance /  
Flight plan info (stars runway)

SMA

ETMS/ASDI

ITWS

TMA

SMS (server)



RMAS



ACARS

SMS Client



MSCAA





# FDX SMS Network Near Future

ATCT

Arinc

MEM ATCT  
3 clients

Lhco-app4

ASDI

Merlin

Vendor Router

Surface

KZME

KZME  
1 clients

MSCAA

MSCAA  
4 Clients

RMAS  
Server

Ramp Tower:

RTO controllers – 8 Solaris clients

RTO Administrator – smsdisplay

Offload – rtotaampc

Hub Control Room

1 Solaris client

ASA

1 client

GOC

Duty Officer – 1 client

ATC Coordinator – 2 clients

Warboard – 1 client

Observation room – 1 client

WarRoom – 1 client

Training – 17 clients

Gate Desk / Routing

1 client

Line Maintenance

Mx shacks – 3 clients

Line Mx Control – 3 clients

Crew Scheduling

3 clients

Flight Coordination / Crew buses

3 clients

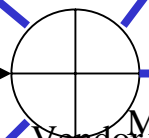
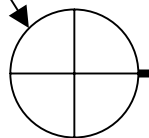
ATO / Test

4 clients

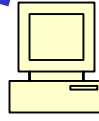
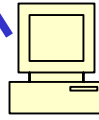
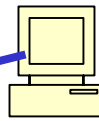
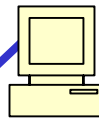
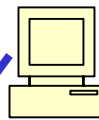
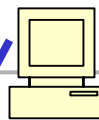
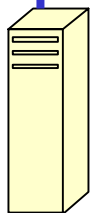
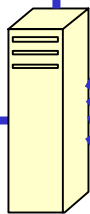
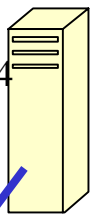
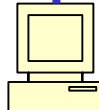
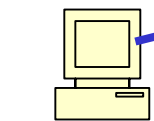
Client

Client Manager

Stars  
Assigned  
Runway



ASDEX DD Surveillance





# Enhancements Desired for Demos

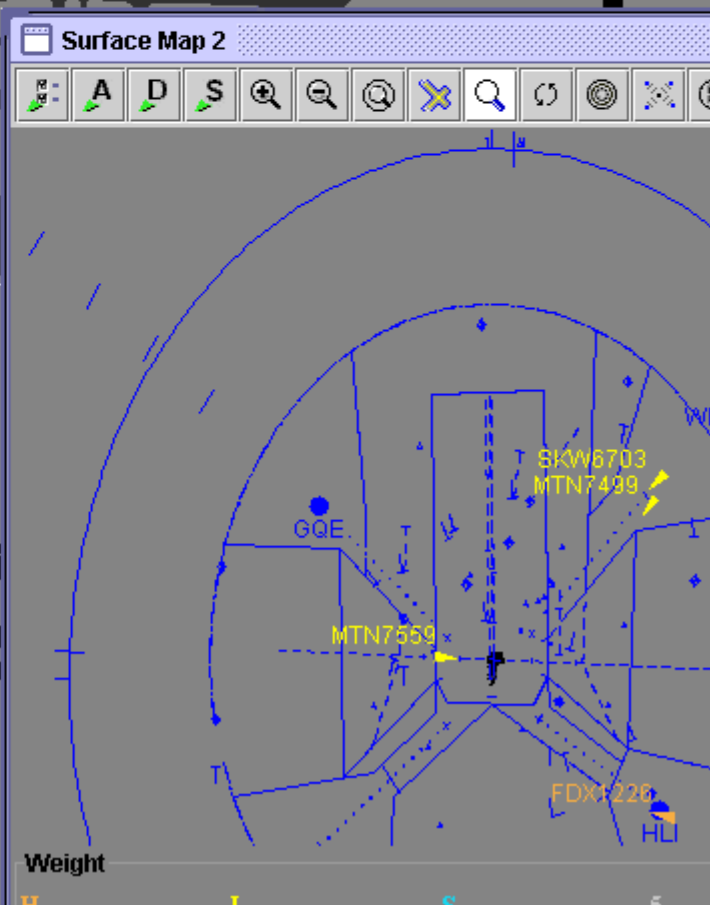
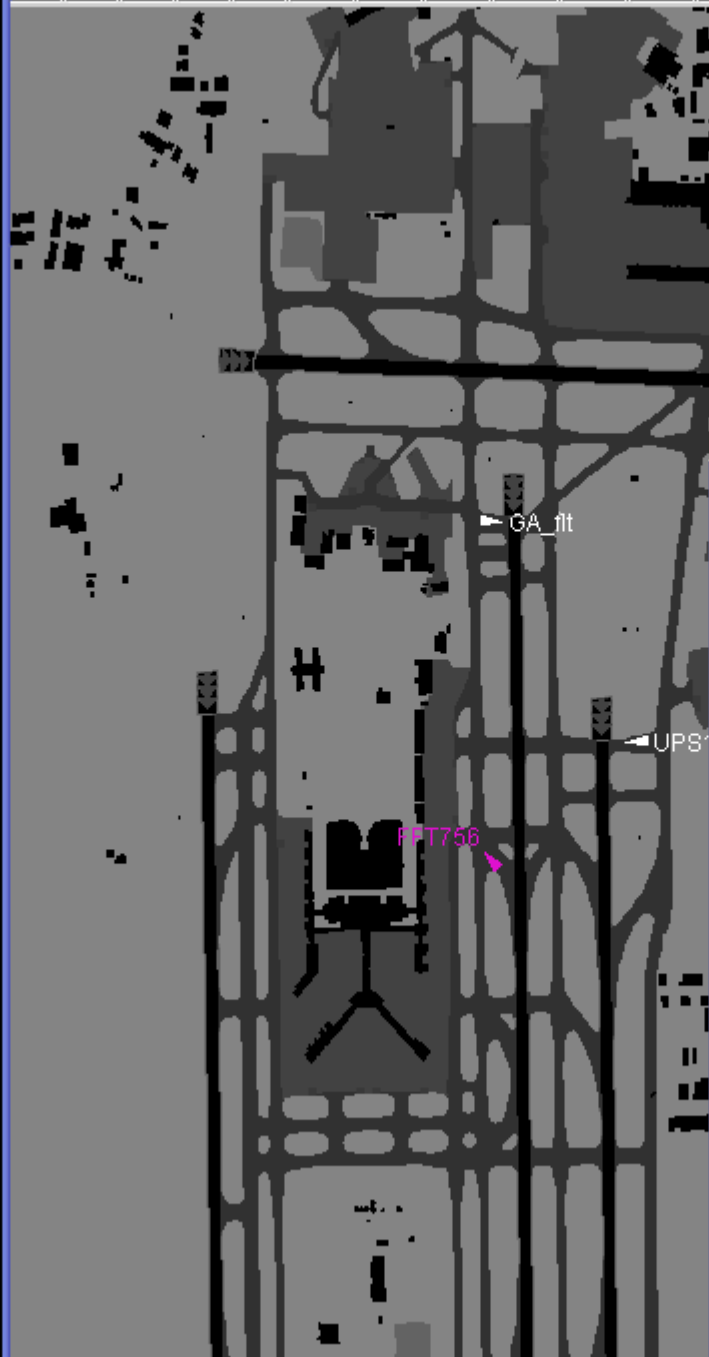
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- TMA interface – How to utilize data
- ITWS/CIWS –
- Multiple airport data – LFPG
- Alert communication tool
- Full EDCT display
- Stars assigned runway
- Ground sensors (additional ramp coverage)
- Acars interface – improve uplink capabilities
- Improve model capabilities – close runways/taxiways
- Calibrate adaptation
- Count down timer



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36L  
1226  
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7559  
904

18L 18C 18R 36L 36C 36R 9 27





# Operational Demos

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- ETA prediction - +/- 2 minutes 30 min in advance
- ESP procedure change – Determine whether ESP times can be requested prior to pushback using SMS runway prediction.
- Cooperative TMA and Arrival Management – Utilize SMS interface to broadcast minor speed changes to MEM inbounds out of TMA's control.
- Departure collaboration – coordinate gate pushbacks in order to achieve desired sequence at the end of the runway.
- Infrastructure allocation – Provide airport authority realtime windows of opportunity to conduct airfield maintenance.



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